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Phase I - Correspondence

State of California

Memorandum

To : Mr. Ron Ott
CALFED Bay-Delta Program
1416 Ninth Street, 11th Floor
Sacramento, CA 95814

Date : August 21, 1996

From : Department of Fish and Game

Subject : Assignment from August 5 and for August 22, 1996, Meetings

Attached is the rating form on proposed CALFED water quality actions (calfed actions 8/1/96) requested at the August 5, 1996, meeting of the Ecosystem Water Quality Technical Team.

We have reviewed the Problem Statement document. Our comments are: (1) Residence time in the Delta is really not a water quality issue, but rather a water supply and use issue; (2) nutrients from wastewater treatment plants have become reduced over the past two decades with improvements in treatment technology, and this may explain some of the loss in productivity; (3) What are you referring to in the statement "Excessive pesticide residues directly affect some fish and wildlife species", specifically what pesticides and which species? CDFG has had a few fish and wildlife losses in the San Joaquin Valley adjacent to agricultural land caused by carbofuran and chlorpyrifos. Is this what you are referring too?; and (4) we're unaware of any evidence which demonstrates that toxic constituents have had a significant environmental impact in the Delta (we have evidence of fish and wildlife losses and toxicity in distinct areas, but no evidence that populations have been affected). Several years ago a review committee of experts from the U.S. Environmental Protection Agency, University of California, Aquatic Habitat Institute, and the State Water Resources Control Board concluded that problems with the adult striped bass were not strongly associated with xenobiotics.

For the table (biota concen, 8/16/96), we're not aware that elevated copper levels (in water?) have been acutely toxic to striped bass or that there are elevated residues of zinc in striped bass tissues. Copper has been at acutely toxic concentrations to salmonids in the Upper Sacramento River below Keswick Dam, and zinc does not bioaccumulate to any appreciable degree. For the table (hotspot.xls sheet1, 8/17/96), we're not aware that Freeport to Hood on the Sacramento River were hot spots for cadmium, copper, and zinc. However, the Upper Sacramento River from the Spring Creek Arm of Keswick Dam downstream to Cottonwood (i.e., Iron Mountain Mine) is a problem area for those three metals.

For the table (traceelem.els effects, 8/16/96), the incipient lethal levels ($0.5 \times LC_{50}$ values) for copper, zinc, and cadmium to salmonids in water of 20 mg/L $CaCO_3$ hardness are 16, 42, and 0.6 µg/L, respectively, which appear to be lower than equivalent concentrations for marine organisms.

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We have also attached several reprints on toxicity studies involving trace-metals, herbicides, and insecticides. We have also attached eight CDFG Environmental Services Division Administrative Reports on pesticides, a chemistry and toxicity study done on the sediments in Keswick Reservoir, and a report on the striped bass health program. Please contact me at (916) 358-2950 (e-mail: bfinalys@hq.dfg.ca.gov) if you need additional information or clarification.

Brian Finlayson
Pesticide Investigations Unit
Rancho Cordova

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Attachments (14)